corpuscles, and, lastly, the muriatic acid for its digestion. A great hinderance to the employment of this broth in summer is its changeableness in hot weather. It undergoes fermentation, as sugar with yeast, without giving a disagreeable odour. What substance causes this change it is very desirable to ascertain. On that account the flesh must be treated with very cold water in a cool place. Icewater and cooling with ice removes this difficulty. But, above all things, care must be observed that the flesh is used fresh, and not several days old. In the hospitals of Munich and in private practice this broth has been employed with great advantage.—*Annalen der Chemie* and *Annals of Pharmacy.*

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

17. *Plastic Bronchitis.*—Dr. T. B. Peacock, Assistant Physician to St. Thomas's Hospital, and Physician to the City of London Hospital for Diseases of the Chest, relates (*Med. Times & Gaz.*, Dec. 30, 1854) a case of plastic bronchitis, in a boy 11 years of age, an out-patient of St. Thomas's Hospital, and presents the following interesting remarks on this disease, which, though rare, is of sufficiently frequent occurrence to render a knowledge of its chief characteristics a matter of practical importance.

"During the last session of the Pathological Society, I prepared a report, since published in the *Transactions*, in which I collected the particulars of thirty-four cases of fibrinous expectoration, and deduced from them certain general inferences as to the circumstances under which it occurs. Since that report was drawn up, a memoir on the subject has appeared, by Dr. Thierfelder, of Leipsic, which contains the account of a case which had occurred to the author, and notices of five others, three of which are new to me. I have also seen the reports of cases by Gendrin and Caseaux; and my attention has been drawn, by Dr. O'Connor, to two interesting communications, containing several well-observed cases, by Dr. Banks and Dr. Gordon, published in the *Dublin Journal*, which, from the unavoidably hasty way in which the report for the Pathological Society was drawn up, had escaped my notice.

"The cases to which I have now alluded, together with those referred to in the report, amount to forty-eight in number; and it would probably not be difficult still further to increase the series. I find, however, that the inferences previously drawn so closely correspond with those which an analysis of the more numerous data establish, that there would be little advantage in endeavouring to obtain a wider basis for generalization.

"1. The *plastic bronchitis, bronchite pseudo-membraneuse,* or *bronchitis crouposa,* as the disease has been termed by different modern writers, is of more frequent occurrence in males than in females.

"2. While the affection is not limited to any period of life, but occurs both in the young, in persons of middle age, and in the old, it is most frequent between the ages of 20 and 50.

"3. It may attack persons who have enjoyed robust health, but generally occurs in those who have been previously suffering from some chronic pulmonary disease, or who have been exhausted by other debilitating causes.

"4. The affection is characterized by the ordinary phenomena of bronchitis, aggravated, however, by the difficulty in expectorating the solid material; and it may either be acute, rapidly terminating in recovery or in death; or chronic, the peculiar sputa continuing to be expectorated, at longer or shorter intervals, for weeks, months, or even years; or it may repeatedly recur on any exacerbation of the bronchitic symptoms.

"5. Hæmoptysis, at least to any considerable extent, is by no means a frequent or even a common symptom; but, on the contrary, the membranous material is most generally expectorated, either almost alone, or mixed with the ordinary bronchitic sputa, usually with the white, glairy, adhesive mucus which first occurs during a bronchitic attack.

"6. The membranous material is most generally of a dull white colour; more rarely of a brownish hue, or slightly discoloured by blood. Chemically and microscopically, it presents the usual characters of fibrin. In form, it may either be moulded into the shape of a bronchial tube and its ramifications, or it may constitute a thin shred of membrane. When assuming the branched or dentritic form, it may be hollow or solid, and is found to be comprised of a number of delicate laminæ, arranged concentrically. The trunk of the branched cast generally has a diameter of from one line to two or three lines, or varies from the size of a small crow-quill to that of a large goose-quill. The branches subdivide till they become very minute. It would thus appear that the casts are generally moulded in bronchial tubes of the third or fourth size; but cases are recorded in which the masses expectorated had a much larger diameter, and in which, after death, the main bronchi have been found obstructed; and others in which the false membranes extended from the smallest tubes to the trachea.

"Michælis supposed that the *bronchial polypi*, as the casts used formerly to be termed, were of two kinds: one consisting of fibrinous exudations from an inflamed mucous membrane; the other being decolorized clots, from blood retained in the tubes after hæmoptysis; and this view was supported by Dr. Cheyne. While, however, the expectoration of solid masses, assuming the form of the bronchial ramifications, occasionally follows profuse hæmoptysis, and so affords support to the idea of Michælis, I believe Dr. Watson to be correct in supposing that the fibrinous material is always the product of inflammation; and the hemorrhage, when it occurs, an accidental complication. In the Report, I have suggested that cases of plastic expectoration may, in some cases, when accompanied by hemorrhage, be analogous to the hemorrhagic pleuritis or pericarditis, the effusion not being limited to the escape of the liquor sanguinis only, but being combined with a discharge of blood-globules; while, in the ordinary form of fibrinous expectoration, the plasma only escapes. In some cases, also, the false membrane may adhere closely to the mucous membrane, and be with difficulty separated from it; in others it may have little or no connection with the exuding surface, and hence another cause of the presence or absence of hemorrhage.

"7. The ultimate result of cases of fibrinous expectoration depends upon the circumstances under which the formation of the solid matter takes place. When, as is not unfrequently the case, the membranous effusion occurs as a complication of phthisis, or of some other fatal disease, it necessarily follows the course, and may but little affect the result, of that disease. When, on the contrary, it is an idiopathic and acute affection, though the symptoms by which it is attended are ordinarily urgent and alarming, it usually soon subsides, under appropriate treatment, and the patient quickly regains his usual health. In other cases, however, the acute symptoms may subside, but the false membrane may continue to be formed, at intervals, for a long period.

"The opinion which I have just expressed of the generally remediable character of the acute plastic bronchitis, is, I am aware, opposed to the conclusion of Dr. Thierfelder, who states, that, in the acute form, the disease is generally rapidly fatal; and refers, in support of his assertion, to the fact, that of thirteen cases which he has collected, and which he very erroneously supposes to be all that have been placed on record within the last 120 years, eleven proved fatal. It is true, that the affection is occasionally attended by fever of a low typhoid type, and proves very rapidly fatal; but most generally the inflammation appears to be by no means intense; the accompanying constitutional disturbance has a sthenic character, and the urgent symptoms subside when the fibrinous material is expectorated. The unfavourable opinion as to the general result which is entertained by Dr. Thierfelder, is owing to the small number of the cases which he has analyzed, and to his having confounded with them cases of acute capillary bronchitis, in which false membranes were found in the tubes after death.

"The case which I have related will be observed to belong to the chronic form of the disease, the patient having had several attacks before that in which he fell under my notice. Like many of the similar cases, he was a very delicate person, and inherited a predisposition to pulmonary disease. The inflammatory symptoms had probably never been very severe, and had already nearly subsided. The casts appear to have been at first moulded in the smaller bronchial tubes of the upper lobe of the left lung, but, as the disease advanced, the fibrin was either effused from the original seat of disease, in larger quantity, or the disease itself extended, so that the masses expectorated had the form of the main bronchus of that lobe. When first expelled, the solid matter formed oblong or rounded bodies, about the size of a filbert, and these, when macerated for a short time in water, gradually unfolded themselves, till their peculiar branched form became apparent; but for the complete separation and exposure of the smaller divisions much careful manipulation was required. The largest pieces expectorated had an extreme length of about three inches, and at the trunk were three to four lines in diameter. In some I was able to trace ten distinct subdivisions, and the terminal portions were most minute. Two or three masses were generally expectorated on the same day, or within two or three days, and he then usually did not bring up any more for a period of a week or ten days; but, occasionally, they were expelled more frequently, and in a day he once expectorated not less than seventeen pieces. When first observed, the membranous material was only expelled after a severe fit of coughing, but latterly they were brought up with little effort. The physical signs which were observed in the case were those of slight capillary bronchitis, with obstruction in the tubes of the upper part of the left lung, and consolidation of the corresponding pulmonary substance. There was slight sibilant rhonchus, with more or less crepitation, heard in different parts of the chest; some dulness on percussion at the upper part of the left side, especially posteriorly; and slight bronchial respiration, with mucous sounds, occasionally having the clicking or valvular character, more frequently the usual subcrepitation, in the same regions.

"These signs correspond with those generally heard in cases of a similar description. In the early stages of the disease there are the usual signs of bronchitis; and, in the later, these pass into those of obstruction of the smaller tubes and consolidation, probably collapse of the lung.

"M. Valleix states that if, when the voice is unaffected, there exist the signs of capillary bronchitis, but, instead of their being a general and abundant subcrepitant rhonchus, the *petite bruit de soupape* is heard, with sonorous rhonchus, we may suspect the presence of false membrane in the tubes; and he refers, in support of this opinion, to cases observed by Caseaux and Barth; the latter I have not been able to find; but M. Caseaux, in the report of his case, describes a sound, *de soulèvement et d'abaissement;* and it is most probable that, under the term of *bruit de soupape,* M. Valleix means the clicking or valvular sound, which was once or oftener heard in the case here related. Dr. Cane mentions having detected a similar sign in a case which he has reported; and Dr. Gordon speaks of a 'peculiar flapping valvular sound,' and 'double flapping sound,' as heard in some of his cases, and evidently regards the sign as that referred to by the French writers. This subcrepitant or valvular sound cannot, however, be regarded as very characteristic of the presence of false membrane in the tubes. Such a sound may be caused by any viscid material obstructing a large bronchial tube; but the precise nature of the effusion can only be ascertained by inspecting the sputum.

While, however, the diagnosis of the plastic bronchitis can thus not be effected by physical signs alone, there are certain general characteristics which sufficiently distinguish the disease from other forms of affection to which it bears a very close resemblance. It has been confounded with the acute capillary bronchitis; but, though in the latter affection, as in cases reported by Nonat and Fauvel, false membranes do sometimes form in the tubes, and the secretion is always very viscid, this cannot be regarded as an essential feature of the disease. Its most striking character is the tendency of the inflammation quickly to extend itself over the bronchial membrane of both lungs, and so to lead to rapid asphyxia; whereas the plastic bronchitis is generally limited to a portion only of one lung, and the physical signs of the two diseases are very dissimilar. The false membrane, in cases of acute capillary bronchitis is also of comparatively rare occurrence; I did not once meet with it in any of the cases which I examined during the last epidemic of influenza, and when it does occur, it is rarely more than in small shreds, which gradually pass into the more usual viscid secretion.

"The acute plastic bronchitis may also be mistaken for acute pneumonia, or for a circumscribed empyema; and when, as in cases mentioned by Dr. Gordon, in addition to dulness on percussion, and absence of respiration, the heart also is dislocated, it would be difficult, if not impossible, to distinguish it from the latter disease.

"The plastic bronchitis is analogous to the form of inflammation of the mucous lining of the air-passages, which is known under the names of diphtherite, angina membranacea, and croup, in the adult, and which, commencing in the fauces, is occasionally continued through the larynx, to the terminal portions of the bronchial tubes.

"It may naturally be expected that, in this communication, some allusion should be made to the cause of the chief peculiarity of this form of disease, and that some reason should be assigned why the mucous membrane, when inflamed, instead of pouring out the usual secretion, exudes a fibrinous material. I regret, however, I have no new views to advance on this point. It is easy to state objections to the various explanations which have at different times been proposed, to show that it cannot depend on the age of the individuals attacked, nor on the intensity of the inflammatory action; that there is no proof that it is owing to the excess of fibrin in the blood, as supposed by some pathologists, or to the particular tissue affected, as imagined by others; and that the views of Reynard and Stokes, that the lining membrane of the bronchial tubes loses the mucous, and partakes more of the serous character as it approaches the periphery of the lungs, is not borne out by recent investigations. I am, therefore, compelled to resort to the unsatisfactory mode of solving the difficulty, by supposing that the exudation of fibrin depends on the specific character of the inflammation, resulting from some peculiarity in the constitution of the individuals affected, though I cannot hazard a conjecture as to the nature of this peculiarity.

"The only other remarks which I have to offer upon the case which I have read, refer to the treatment which was adopted. Before the patient fell under my notice, the period for active interference had passed, and the indications to be fulfilled, consisted in the relief of the slight bronchitic symptoms still existing, and the prevention of the further formation of the fibrinous material. For the first purpose, expectorants, anodynes, and counter-irritants were employed; and for the second, tonics, and especially the cod-liver oil; and I have, within the last few days, seen the patient, and have found him tolerably well, and free from cough or expectoration. How far, however, his recovery will be permanent it is impossible to say.

"In the cases of acute plastic bronchitis which come under the care of the medical practitioner at the commencement of the disease, the aim should be—1st, to relieve the inflammatory symptoms; 2d, to assist the expulsion of the membranes when formed; and 3d, to prevent their further formation. These indications should be accomplished by a judicious employment of antiphlogistic measures, regulated by the urgency of the symptoms and the power of the patient. It would be necessary to cup or apply leeches over the affected part of the chest, to exhibit antimony, and to affect the system mildly with mercury. The expulsion of the membrane might be assisted by the use of emetics, and by inhalations of the vapour of water, or of ethereal or other fluids; and the further formation of the membrane would probably be best controlled by mercury. In the later stage, the use of anodynes and tonics would be required.

"The use of mercury in conjunction with other antiphlogistic means is strongly recommended by Drs. Gordon and Banks; and Dr. Thierfelder, while he says little benefit results in the acute disease from a purely antiphlogistic course, approves of the employment of depletion in combination with mercurials. He also regards mercurials, the hydrochlorate of ammonia, and the iodide of potassium, as beneficial in the chronic form of the disease. The latter remedy he employed in the treatment of the case which he has related, in very large doses. Dr. Watson, in alluding to a case of plastic sputum, which was attended with hemorrhage to an alarming extent, remarks that, though the case at first seemed to call for active interference, and was in consequence energetically treated, on looking back upon it, he regarded the treatment as having been unnecessarily active; and the remark seems applicable to a large proportion of the cases of this description. Though alarming in their first appearance, they often do not seem to require very active measures for their relief. In those cases in which the disease becomes chronic, or recurs at intervals, on any exacerbation of bronchitic symptoms, protection against the weather, and, if possible, residence in a warm climate, should be enjoined."

18. *Case of arrested Pulmonary Tuberculosis.*—By Dr. Stokes. Some years ago I saw a gentleman, who came to town labouring under all the symptoms of well-marked phthisis. The disease had been of some months' standing, and the patient *was a perfect* picture of consumption. He had a rapid pulse, hectic, sweating, purulent expectoration, and all the usual *physical signs* of tubercular deposit, and *of a cavity* under the right clavicle. I may also state, that the history of the disease was in accordance, in all particulars, with this opinion. I saw this patient in consultation with a gentleman of the highest station in the profession, and we both agreed that there was nothing to be done. This opinion was communicated to the patient's friends, and he was advised to return to the country. In about eighteen months afterwards a tall and healthy-looking man, weighing at least twelve stone, entered my study, with a very comical expression of countenance: "You don't know me, doctor," he said; I apologized, pleading an inaptitude that belongs to me for recollecting faces. "I am," he said, "the person whom you and Dr. —— sent home to die last year. I am quite well, and I thought I would come and show myself to you." I examined him with great interest, and found every sign of disease had disappeared, except that there was a slight flattening under the clavicle. "Tell me," said I, "what you have been doing?" "Oh!" he replied, "I found out from the mistress what your opinion was, and I thought as I was to die I might as well enjoy myself while I lasted, and so I just went back to my old ways." "What was your system of living?" said I. "Nothing particular," he said; "I just took what was going." "Did you take wine?" "Not a drop," he replied; "but I had my glass of punch, as usual." "Did you ever take more than one tumbler?" "Indeed, I often did." "How many? three or four?" "Aye, and more than that, I seldom went to bed under seven!" "What was your exercise?" "Shooting," he said, "every day that I could go out." "And what kind of shooting?" "Oh, I would not give a farthing for any shooting but the one!" "What is that?" "Duck shooting." "But you must have often wetted your feet?" "I was not very particular about the feet," says he, "for I had to stand up to my hips in the Shannon for four or five hours of a winter's day, following the birds."

So, gentlemen, this patient spent his day standing in the river, and went to bed after drinking seven tumblers of punch every night; and if ever a man recovered from phthisis he had done so when I saw him on that occasion. Suppose, now, that he had been confined to an equable temperature, and a regulated diet, and had been treated in all respects *secundum artem*, what would have been the result? Any of you can answer the question. In point of fact, this very treatment had been adopted during the first three months of his illness, and his recovery may be fairly attributed not so much to the duck shooting and whiskey-punch, but to the tonic and undepressing treatment which he adopted for himself, and which his system so much required to enable him to throw off the disease.—*Med. Times and Gaz.*

19. *Tuberculosis limited to the Base of the Right Lung.*—The following case related by Dr. J. T. Banks, one of the physicians to the Whitworth Hospital, is interesting, as presenting a very unusual exception to the general rule as to the primary seat of tubercle:—

"A man, aged 40, was admitted into the Whitworth Hospital; he had been ill for some time previously, but had not been incapacitated from following the arduous occupation of a labourer. The symptoms under which he suffered before his admission were cough, hurried respiration, and pain in the right side.

"On being questioned, it appeared that he had never had hæmoptysis, nor, in short, any ailment until his present, and that there did not exist any hereditary taint. A few days before entering the hospital, he perceived that his expectoration had acquired a most offensive odour.

"His appearance was that of a man who had long laboured under disease. His skin was sallow and greasy; his pulse accelerated, never under a hundred; respiration rapid; he complained of debility, loss of appetite and of night-sweats. On examination of the chest the upper regions were found, both on auscultation and percussion, to be perfectly free from any morbid sound. The base of the right lung was dull, and a coarse muco-crepitating rale was audible; there was also an augmentation of vocal resonance. He complained of cough, followed occasionally by the expectoration of matter which was distinctly purulent and of an abominable fetor. After a violent paroxysm of cough he often got up a very large quantity of the purulent fluid, which was always followed by relief.

"He gradually lost flesh and strength; he suffered at times from diarrhœa. The auscultatory signs of cavity at the base of the right lung became manifest, cavernous breathing was audible, with gurgling and pectoriloquy, which was so marked as to be almost painful to the ear of the auscultator. The purulent fetid fluid continued to be expectorated in great quantity, and after a residence of seven weeks in the hospital, he sank under the influence of his wasting malady. The apices of the lungs anteriorly and posteriorly, up to the close of life, were free from any sign of diseased action.

"The autopsy revealed the existence of tubercular infiltration of the base of the right lung, with numerous cavities. In no other part of the lung was there a trace of tubercular deposition.—*Dublin Hospital Gazette*, 15th Feb., 1855.

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20. *The cracked pot sound* (*bruit de pot filè*) *is not always indicative of a cavern.*—Prof. BENNETT states that, "On examining a man called John McKay, on the 2d of November, 1854, it was determined on percussion of the apex of the left lung anteriorly, that it was unusually resonant, and accompanied by distinct cracked pot sound, of a clanging character. On auscultation over the part, the inspiration was harsh and exaggerated, the expiration prolonged, and the vocal resonance very loud, amounting to pectoriloquy. This unusual combination of physical signs attracted my attention. The rest of the lung, as well as the condition of the opposite one, together with the symptoms, could leave little doubt that this man was in the last stage of phthisis pulmonalis. The disease followed its usual progress, both lungs being ultimately affected, and the apex of the left one always presenting on percussion the same physical characters as have just been described, without moist rattle of any kind. He died January 6th, 1855, and on the following day his body was examined. Both lungs were scattered throughout with miliary and infiltrated tubercle, and the intervening pulmonary tissue was loaded here and there with simple exudation. At the apex of the left lung was a mass of bluish-gray miliary tubercles, about the size of a hen's egg, closely condensed together, very hard to the feel, and cutting under the knife with considerable resistance. This mass was solid throughout, tolerably limited, the pulmonary tissue around being light and spongy, containing a few very small isolated tubercles. There was no cavity or softened tubercle in this left lung, although in the opposite one, a few small anfractuous excavations existed here and there in the upper lobe.

According to Skoda,[1] "the cracked pot sound is heard in the thorax, over tolerably large and superficially situated cavities which contain air, and communicate with the bronchial tubes. When the percussion is forcible, or the thoracic walls flexible, the cavity is compressed at each stroke, and a portion of air suddenly driven out of it into the bronchial tubes; this hissing murmur, caused by the escaping air, is mixed up with the ordinary percussion sound of cavities, and this compound represents the cracked pot sound." But the observation made in the case of McKay, has satisfied me that occasionally distinct cracked pot sound may be elicited over condensed lung, without any cavity whatever. In referring to an excellent paper on this subject by Dr. Markham,[1] I find that on one occasion, both he and Dr. Sibson have noticed this phenomenon, over the upper portion of a lung, which was afterwards shown to be gorged with blood and serum, though still retaining some portion of air. It would seem, from what has been said by Skoda, Stokes, Walshe, as well as by Dr. Markham, that a peculiar tympanitic sound may be heard over collapsed or condensed lungs, when covered or mingled with a certain amount of air. For instance, when in cases of pleuritic exudation, air is effused into the pleura, a few hours before death—when in certain cases of pneumonia there is also emphysema, etc. In the case I have alluded to, these conditions were so far fulfilled, that the tubercular mass described was surrounded by spongy lung full of air. At all events, it must be evident, that the physical conditions on which this peculiar sound depends, require more careful study, and that our ideas as to its necessary connection with a cavity, must undergo modification. —*Monthly Journ. Med. Sci.*, Feb., 1855.

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[1] Markham's translation, p. 21.

21. *Absence of Chlorides from the Urine, Diagnostic of the Onward Progress of Pneumonia.*—In the April number of the *Monthly Journal of Medical Sciences*, Prof. BENNETT gave an account of certain facts which confirmed the statements of Simon, Redtenbacher, Beale, and others, as to the absence of chlorides in the urine during the onward progress of pneumonia. The professor resumed these inquiries on returning to the clinical wards of the Edinburgh Hospital last summer, and in the number of the above mentioned Journal for December last, he relates three cases of the disease there treated which confirm the diagnostic value of this change in the urine. In all these cases the absence of chlorides marked precisely the onward march of the pneumonia, whilst their presence indicated its cessation and was generally accompanied by the returning crepitation and commencing absorption of the exudation.

22. *Pathology of Saccharine Assimilation.*—Dr. GIBB read a paper on this subject before the Medical Society of London (Jan. 27, 1855), of which the following is an abstract:—

Before entering upon the pathology, he gave a brief summary of the physiology of the subject to the present time, and referred to the discoveries of Bernard, Pavy, and himself. He considered that the relation subsisting between fat and sugar, more especially in the liver, and as likely to help in the working out of the pathology of fatty degeneration, was a discovery, the importance of which could not be over-estimated. He gave a table of the pathological conditions of saccharine assimilation, and considered some of the more important. In diabetes, he supported Prout's view of the formation of quantities of sugar in the stomach, which, owing to paralysis of the converting function was absorbed into the circulation. This condition he looked upon as the result of the paralysis of the saccharine functions of the liver, which he believes to be arrested in this disease, and not over-exerted, as Bernard believes. The principal evidence he brought forward in support of this view was the invariable absence of sugar in the liver after death, and the "starved" state of the liver, from its poorness in fat. In fatty liver only did he consider the saccharine function abnormally active. The gorged condition of the portal venous system, found after death, he looked upon as owing to hepatic obstruction, due to the paralysis of the special function of the liver, from taking too much gastric sugar to that organ which it could not assimilate. If thoracic disease was a frequent termination of diabetes, it was due, he believed, to the want of the naturally formed hepatic sugar to undergo combustion, and not from excessive combustion of the sugar, as Bernard maintains. He admitted, however, that diabetes and allied affections were under the governing power of the medulla oblongata and its branches, and sympathetic communications. One of the uses of healthily-formed sugar in the liver, independent of combustion in the lungs, he said, was to form fat; and he believed it to be one of the great sources of the fat throughout the system; and that, if sugar was convertible into fat, fat could not be reconverted into sugar; and he supported this view by reference to experiments. He next considered oxaluria, in connection with sugar, and believed there is a mutual relationship existing between the two, but not constant. In dwelling upon diseases of the liver, he mentioned that fatty liver was the only abnormal condition which did not interfere with its healthy function; but here it was increased, and, as the lungs did not consume it proportionate to its secretion, it was converted into fat in the liver. He drew an analogy between this condition in the marine mammalia, marine birds, etc., and the same condition in man; in the former it was a normal process, while in the latter it constitutes disease. He related some cases of disease in the body, accompanied with fatty liver, to prove that the severity of a disease elsewhere does not necessarily destroy the saccharine function of the liver. In one recent instance he found sugar in fatty liver, coincident with cancer of the same organ. In other diseases of the liver sugar is absent; in cholera, sugar is more easily detected in this organ than in health. In relation to nervous affections and saccharine assimilation, he believed there was a very great sympathy between the two, perhaps more so than in other classes of disease. He confirmed the observations of Dr. Goolden, having found the urine saccharine in many nervous affections; he had found this fluid saccharine in epileptics, even when convulsions were threatened, but which passed off; also in pertussis, both in its simple and complicated forms. He briefly went over the special conditions of the base of the brain, as likely to influence saccharine assimilation. From the length of his paper, the author was only able merely to allude to the influence of dyspepsia, gout, boils, and carbuncles, Bright's disease, tuberculosis, abscesses, diseases of the respiratory system, cholera, milk, and the effects of certain medicines, upon saccharine assimilation. The peculiar effects of each were shown in a large diagram.

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[1] Monthly Journal for June 1853, p. 495.

Dr. Goolden expressed his concurrence in the views entertained by the author, and mentioned that in an analysis of the urine of a large number of patients suffering from nervous disease, sugar was discovered in many of the cases; but very recently, the analysis having been continued by the same person (Dr. Dundas Thompson), sugar was not found to anything like the same extent. The cholera in 1832 was preceded by a greater amount of saccharine matter in the urine of patients. He (Dr. Goolden) had traced many cases of diabetes to injury of the brain. One resulted from the kick of a horse, and another from the falling of a piece of timber on the patient. In both these cases the quantity of urine was diminished from twelve or fourteen to about five pints, below which it was difficult to reduce it when the quantity was at first considerable, even after the saccharine principle had disappeared. The kidneys, once accustomed to secrete large quantities, continued to do so. His treatment had not been so successful as he at first had anticipated, but in many cases he had materially relieved the patients. In his experience animal diet did not diminish the quantity of urine, and he always allowed his patients milk and farinaceous food *ad libitum*. He saw no benefit to be derived from prohibiting fluids. Opium influenced the amount of sugar in some cases, but not in all.—*Med. Times and Gaz.*, Feb. 3, 1855.

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23. *Nature and Treatment of Diabetes Mellitus.*—Dr. F. HEADLAND read, February 10, last, before the Medical Society of London, a paper on this subject. After a slight general sketch of the symptoms, he proceeded to the inquiry, What is the physiological cause of this abnormal and excessive secretion of glucose, or grape sugar? Three chief theories had been brought forward to account for this.

1. *Theory of Renal Disorder.*—By Dr. M. Good and others of his time it was supposed that the glucose was formed by the kidney in the act of secretion. The author discussed the various alleged morbid conditions of the kidney in

diabetes, none of which are known to be constant. The discovery of sugar in the blood and other secretions of diabetics is sufficient to overthrow this theory.

2. *Theory of Saccharine Assimilation;* held by Bouchardat in France, and by the majority of physicians in England. It supposes that the formation of glucose is due to a deranged digestion or assimilation. Most consider that it is formed in the stomach; others blame the liver. This notion, also, the author disclaimed—arguing that, after a meal on starchy matters, grape sugar may be found in the blood of a healthy man; that it is part of the function of the liver to form sugar and fat out of albuminous compounds; and that this explanation does not account for the excretion of sugar, for grape sugar given to a healthy man does not pass out in the urine.

3. *Theory of Saccharine non-Assimilation.*—Supported by Mialhe, Liebig, B. Jones, and others. To this the author gave his own adhesion. It derives confirmations from the experiments of Lehmann, Dumas, and D. Thomson. The starch of the food is the chief supporter of the respiratory process. Starch cannot be absorbed without being first changed into dextrine. This is a sort of transition to grape sugar, into which it is all formed in the blood. This grape sugar is not yet in a condition to be oxidized; it is therefore again changed into two atoms of lactic acid (or some very similar material). This then combines with oxygen in the blood, supporting the animal heat by its combustion, and forming carbonic acid. These changes require certain agents, probably ferments, to effect them. Supposing they have proceeded as far as glucose, and the agency be wanting which should change this into lactic acid—then the glucose, not being available to the system, is excreted in the urine. The liver attempts to supply the want by forming glucose and fat out of albuminous food. This glucose passes also into the urine. In addition to all this waste, the very tissues are preyed upon to supply fuel for the respiration. The author then discussed at length the subject of treatment, under the following heads:—

A. *Erroneous Plans of Treatment.*

1. Attempts to prevent the formation of glucose.
2. Attempts to hinder the excretive function of the kidney.

The first is a natural process; the second is a healthy provision.

B. *Doubtful Plans of Treatment.*

1. The use of diuretics.
2. Stimulation of the nervous centres, as by strychnia.
3. Treatment directed to the liver.
4. The use of oxidizing agents.

C. *Correct Plans of Treatment.*

Dietetic Rule.—To supply, if possible, such articles of food as shall be able, at the same time, to nourish the patient, and to maintain the respiratory combustion without passing through the stage of glucose. (Among other things, fat and oils, dry wines, and milk, were recommended.)

Therapeutic Indications—

1. To give some remedy that shall seem to be capable of causing the glucose to undergo its normal transformations. Yeast, rennet, pepsin, etc., were discussed. The author particularly recommended *milk just turned sour*, as containing a decomposing casein, which transmutes milk sugar into lactic acid. He had advised the use of this remedy in his *Essay on the Action of Medicines.* It should be used as an article of diet; or it may also be given in enemata, and in warm footbaths.

2. To replace the urinary secretions by means of diaphoretics and purges. (The author recommended copious sweating, for a physiological reason.)

3. To attend to the general health, and to treat complications.—*Med. Times and Gaz.*, Feb. 17, 1855.

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24. *The Juvantia and Lædentia in Diabetes.*—John M. Camplin, Esq., in a letter to Dr. Bright, read before the Royal Medical and Chirurgical Society January 9, 1855, gives some particulars of his own case, believing that the means which proved beneficial to himself may afford hints useful in the treat-

ment of others. It was nearly ten years since the author was attacked with diabetes. The symptoms appeared to have been of unusual severity, and many of his professional friends viewed his case as all but hopeless. The principal interest of the paper consists in some modifications of diet, which, the author thinks, contributed most essentially to his recovery. In addition to the usual nitrogenous diet recommended to diabetic patients, and, as a substitute for bread, he first tried a cake or biscuit made of washed flour and lard; but this article soon disagreed. He then tried gluten bread; but, after a year or two, it became so unpleasant as to be insupportable, and he abandoned it, and never resumed it. Dr. Prout recommended him a bran cake, but the coarse particles of the half-ground bran acted on the bowels, and could not be continued in that form. The author devised a hand-mill, by which he succeeded in grinding the bran into a very fine powder, and in making a kind of cake, the use of which he was enabled to continue for some years. The author gave a formula by which this cake may be made, and is the same in substance as the directions contained in a foot-note in Dr. Pereira's last edition of the *Materia Medica.* The author believes that the bran cake greatly ministered to the prolongation of his life, and is desirous of stating his opinion, that some modification of this bran cake might be made on a large scale, and be used with equal success in our hospitals. The use of fat meat and eggs the author found productive of biliary derangement, which, although they might have exercised some unfavourable effect on the constitution, did not appear to augment the diabetic symptoms. The author spoke of the propriety of using curds instead of butter, and the advantage he derived from this preparation from fresh cow's milk. With regard to vegetables, he limited himself at one period exclusively to the cruciferæ. In respect of tea and coffee, the author gave the preference to the former; and, as a beverage at dinner, very dilute brandy and water; or, if wine was employed, it should be claret, as he found other wines injurious. He alluded to the remedial influence of cold and tepid sponging of the surface of the body, and the effects of warm bathing, not omitting the benefit to be derived from efficient clothing. The author's experience of other cases, as well as from his own, led him to the conclusion that there was no specific for this disease; for the cases he had witnessed had improved under the use of various remedies, keeping in view the great principle of building up the system, promoting the action of the skin, regulating that of the liver, and, as much as possible, removing the causes which aggravate the disease. Among remedies, the citrate of ammonia in the effervescing form, combined with the citrate of iron, afforded him at one period of the attack very sensible relief. The author was inclined to class the disease among the neuroses, believing that exhaustion of nervous power existed in all cases. In his own person, two causes had been long at work; the wear and tear of a laborious profession, and an ill-regulated diet; but he was not desirous of raising any discussion on this point, as his aim in the present communication had been simply to relate the facts of his own case, and the results of actual experience.

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25. *Diagnosis of Typhous and Typhoid Fevers.*—By Dr. Parkes. You are brought to see this young woman, we will say, for the first time: the specific rose-spots are gone; she is labouring to all intents and purposes under severe bronchitic and chest symptoms (a chemist, or practitioner with a druggist's shop, has prescribed, and given cough mixtures, perhaps, without seeing her); you find her respiration 30 in a minute, cough incessant, with some expectoration, nervous symptoms also well-marked; vertigo complained of, torpor, the eyes closed; she is delirious at night; she has also diarrhœa, pain over the abdomen, pulse quick, tongue furrowed and somewhat coated. Suppose, I say, you were called to such a patient, and moreover she is unable to give any account of the previous illness, how are you to make the diagnosis? There are only two ways—one the positive method, the other the method as it is called by "exclusion." The first is obvious enough, and will of course be more valuable to the practised eye of the experienced physician, who seizes the nature of the case at the first glance by a sort of intuitive knowledge of what typhoid really is. Now the method of diagnosis by exclusion—the plan of logic-writers, *per viam exclusionis,* in this and other

diseases, is one, though not without disadvantage, one yet of no mean importance. The first question you resolve in your mind will be—is she or he, as the case may be, labouring under any of the idiopathic fevers? any of the exanthemata? No. Is it typhous? You make the same answer, as the eruption in ty-*phus* is as different from ty-*phoid* as scarlatina from measles. The eruption is absent in patients under 22 or 21 (this patient's age is about this). Is it relapsing fever, so common some years, as 1828–29? No. You ask yourself, then, is it typhoid? Yes. Nervous symptoms are marked, chest symptoms and diarrhœa also; the latter loose, granular, yellow, so peculiar to typhoid. You have soreness of the right iliac fossa; but then you say we have no rose-spots, and then you remember in at least 20 per cent. these rose-spots are not found. You must weigh and balance all these circumstances in your mind.—*Med. Times and Gaz.*

26. *Non-identity of typhous and typhoid fever.*—Although typhous and typhoid fevers resemble each other very much in their external appearances, Professor Forget of Strasburg believes that they are clinically and essentially different in their nature. They are anatomically different; they are not equally frequent in their occurrence; and typhoid fever may arise from many causes, quite irrespective of infection. In follicular enteritis the typhoid condition is not constantly present, and it is usually secondary; while in typhous, the prostration and stupor, attending its invasion, indicate a powerful intoxicating principle, acting primarily as a poison, which is not usual at the commencement of the typhoid state. Gastro-intestinal symptoms are more constant and primitive in typhoid than in typhous fever; for in it they are occasionally found existing alone; and we very rarely see cases of follicular enteritis which do not present the rough (*saburral*), punctulated, and rosy tongue; also *gargouillement* and pain in the right iliac region, and either diarrhœa or constipation. Though other symptoms may coexist with them, they are never wholly obscured. In typhous again, especially at its outset, the tongue is frequently moist, smooth, and white; meteorism and abdominal pain are absent, and there is no derangement of the process of defecation. If we except the rosy, lenticular spots, peculiar to typhoid fever, and which constitute, according to M. Forget, its most constant differential sign, there are no symptoms in general connected with either malady which are not purely accessary and inconstant. Typhoid fever is usually slow, and gradual in its course, and in simple uncomplicated cases its evolution is in exact ratio to the development of the intestinal lesion. In typhous, on the other hand, the disease is very violent at first, and afterwards becomes suddenly or alternately better or worse, and often in those cases which appear the most unfavourable, it advances rapidly and spontaneously to a favourable termination. Ataxia characterizes it more than it does typhoid fever.

As regards the treatment of the two diseases, Professor Forget says that while, in typhoid fever, this must always be adapted to the peculiarities of each particular case, special attention must be paid to the intestinal ulcerations which are present during its course, and that all those medicines should be avoided which are calculated to aggravate these lesions of the alimentary canal. There is no need for this caution in cases of pure typhous.—*Monthly Journ. Med. Sci.*, Feb., 1855, from *Gaz. Med. de Paris*, Nos. 42–48. 1854.

27. *Some Points in the Treatment of Gout, Rheumatism and Rheumatic Gout.*—Dr. Fuller read a paper on this subject before the Western Med. and Surg. Soc. of London. He commenced by stating, that in all diseases, but especially in those which, like gout, rheumatism, and rheumatic gout, are attributable to faulty assimilation and the consequent formation of a morbid matter in the blood, the success of treatment must necessarily depend upon the care and judgment bestowed on four several points—first, the history of the case; secondly, the appearance and general condition of the patient; thirdly, the character of the excretions; and, fourthly, the selection and adaptation of proper remedies to meet the various exigencies of the case. He then proceeded to point out the bearing of each of these considerations upon the course of treatment to be pursued, and after drawing attention to the close relationship

subsisting between the amount and character of these various excretions and the condition of the system generally, he insisted on the necessity of providing for the full and perfect action of all the excretory organs. He instanced cases which had fallen under his care at St. George's Hospital, in which the long continuance of the disease was evidently referable to the sluggishness of some one particular organ; and others in which the obstinacy of the symptoms was attributable to the imperfect action of all the excretory organs, rather than to extreme sluggishness in any one of them. These latter cases, when not attended by fever, and when characterized by affection of the muscular structures, are often benefited by bark and hydrochlorate of ammonia, which, under such circumstances, has the effect of promoting an increased flow of all the excretions, and so of eliminating the *materies morbi* and checking the disease. Dr. Fuller, however, dwelt especially on the fact, that under different conditions of the general health, very different remedies are needed to regulate the various excretions. He showed, that when the system is low and deficient in vital energy, tonics, such as bark, quina, sarsaparilla, steel, and cod-liver oil, together with change of air, change of scene, freedom from anxiety, and the use of proper baths, and a due amount of exercise, form the most effectual means of checking the mal-assimilation on which the formation of the poison depends, and of increasing the action of the excretory organs, whereby its elimination is brought about; and that, unless such remedies are exhibited, and the tone of the system is improved before colchicum, guaiacum, and other so-called "specifics" are administered, no good results can be produced. He attributed the failure of treatment, in many instances, to want of care in tracing out the history of the case, whereby it happens that purely neuralgic pains, as well as the pains which follow the incautious use of mercury, and the pains and swellings resulting from a gonorrhœal taint, are confounded with gout and rheumatism, and are wrongly treated accordingly. He regards the too frequent habit of treating disease in accordance with its name, rather than according to the condition of the patient and the character of the secretions, as another cause of failure, inasmuch as it leads to the practice of prescribing each of the so-called specifics separately, and apart from other remedies. He pointed out, that, in most cases, the action of all the excretory organs is disordered; and that, whereas no single remedy will excite them all equally to action, the judicious practitioner should employ such a combination of remedies as will prove efficacious for the purpose. Dr. Fuller combated the opinion advanced by Dr. Garrod as to the non-existence of such a disorder as rheumatic gout; and avowed his belief that the three forms of disease which form the subject of his paper are referable to different forms of mal-assimilation and the consequent formation of different poisons in the blood; and he urged the remarkable differences observable in the age, sex, and physical condition of the sufferers from rheumatic gout, in the ascertained causes of the disease, the mode in which it makes its attacks, its symptoms, its behaviour under treatment, and the pathological changes to which it gives rise, as evidence in favour of its being a disease essentially distinct both from gout and rheumatism. He admitted the value of Dr. Garrod's uric acid test as a means of distinguishing, in most instances, between gout and rheumatism, as well as between true gout and rheumatic gout; but he did not admit the absence of uric acid from the blood as proof of the disease being pure rheumatism. Moreover, admitting the value of the test theoretically, he denied its practical utility. Its only indicational value is in regard to the administration of colchicum, and even in this respect it cannot be trusted. In no cases is lithic acid more abundant in the blood than in those old cachectic cases of gout, accompanied by the formation of chalk-stones in the joints and by granular degeneration of the kidneys, yet in none is colchicum of less avail or more ill borne by the system. On the other hand, when the blood is free from lithic acid, as it usually is in true rheumatism, colchicum is often of great service, by acting as an evacuant and influencing the secretions of the kidneys, liver, and bowels. Colchicum, therefore, should not be relied upon in all cases of gout, neither should it be discarded in all cases of rheumatism; and in the one as in the other, the history of the case, the condition of the patient, the stage of the disease, and the character of the excretions, must be our guides to the administration of that or of other remedies.—*Med. Times and Gaz.*, Feb. 3, 1855.

28. *New remedy for Pruritus Vulvæ.*—Dr. Sholz recommends an Indian plant, the *Caladium seguinum*, which is used by the natives of India as an anaphrodisiac, for the treatment of those cases of this most distressing malady, which are due rather to a hyperæsthetic condition of the parts, than to any lesions of the mucous membrane of the vulva. The plant belonges to the *Aroideæ.* Scholz has used it with great success in two cases which had previously resisted all remedies; and he administered it in the form of an alcoholic tincture in doses of six drops.—*Arch. Gén. de Méd.*, Sep., 1854.

29. *Anaphrodisiac properties of Bromide of Potassium.*—Thielmann recommends this remedy as an excellent anaphrodisiac in satyriasis, in the frequent and painful erections during gonorrhœa, in spermatorrhœa, and in nymphomania. He administers it in doses of from 2 to 3 grs. every two or three hours; and, at the same time, enjoins a mixed vegetable and milk diet, and forbids all acid substances —*Med. Zeit. Russl.*, 1, 1854.

30. *Sulphate of Quinine in Phthisis.*—D. Muntendam, a Dutch physician, has just published a paper to show that, from his experience in twenty-two cases, sulphate of quinine, given along with acetate of morphia, or even alone, is capable of prolonging the life of the patient in many cases of phthisis, and that it may even effect a cure in those cases in which a tubercular deposition has just commenced, especially in married women and children. He alleges that, when given continuously in small doses, it does not cause dyspnœa, diarrhœa, headache, or any disagreeable effects; and he believes that in very many, but not in all cases of phthisis, it should be ranked as one of the best remedies for the disease.—*Monthly Journ. Med. Sci.*, Feb., 1855, from *Nederlandsch Lancet.*

31. *Borax injections in Infantile Diarrhœa.*—M. Bouchut considers infantile diarrhœa to be of two kinds; the one, symptomatic of lesions of the intestinal mucous membrane; the other, idiopathic, a nervous or catarrhal flux from the great intestine, which may occasion death, without leaving any material morbid appearances. In the latter variety, M. Bouchut recommends clysters containing the bi-borate of soda, as peculiarly efficacious. This remedy proves as beneficial as it does in aphthæ of the mouth, it acts as a weak astringent on the intestinal mucous membrane, and as an alkali in neutralizing the acid secretions poured out by it, which lead secondarily to ulceration of the bowels, and especially of the anus.

He uses clysters containing from 10 to 20 grammes of the salt, in 125 grammes of water.

In cases of infantile diarrhœa symptomatic of intestinal ulcerations, M. Bouchut has found benefit from the use of borax, administered internally in the dose of 2 grammes, in 80 grammes of a mucilaginous emulsion.—*Gaz. des Hôpitaux*, 16th Sept., 1854.

32. *Trial of Phosphorus in Paraplegia.*—Prof. Bennett has given phosphorus in seven cases of paraplegia from disease of the spinal cord, in the form of phosphuretted oil (4 gr. of phosphorus dissolved in ℥j of olive oil.) In none of these cases has he been able to satisfy himself that any improvement was occasioned. He commenced with three drops a day, which were afterwards cautiously increased to ten, and in one case to fifteen drops. But these large doses soon induced violent nausea and vomiting, and, after a short suspension of the remedy, he continued it in doses of three drops.

In the case of chronic myelitis, which took ten and fifteen drops, the phosphorus was excreted by the lungs, as the breath smelt strongly of the drug, but was not phosphorescent at night—a phenomenon which has been seen by some physicians who have employed it. In another case, that of a delicate woman, with probably congestion of the cord, a large amount of phosphate was passed in the urine presenting, under the microscope, beautiful feathery crystals.

The dose of the oil, therapeutically, ought never to exceed five drops, and even this amount cannot be administered for any length of time without deranging the stomach.—*Monthly Journ. Med. Sci.*, Feb., 1855.

33. *Therapeutic Action of Lupulin.*—Debout's observation on the favourable influence of lupulin in quieting painful erections induced Dr. ZAMBUCO to institute some experiments with the medicine, which, to prevent mistakes, he administered to the patients with his own hands. The form was threefold; pure lupulin, the tincture, or mixed with an equal part of sugar. The doses were different: of pure lupulin, 1—16 scruples (these high doses caused no disturbance of the nervous system); the tincture, 2—16; the mixture with sugar, 2—3. From eight well-marked cases of painful erection, consequent on gonorrhœa, out of a much larger number, the author was enabled to draw the following conclusions: Lupulin possesses a remarkable effect upon the genital organs; the erethisms were quieted in four-fifths of the cases. It is of therapeutic utility when there exists the necessity for keeping the penis in a state of rest. Camphor given in large doses, with a similar object, both irritates the alimentary canal, and often fails in its end. The sedative and anti-blennorrhagic influence of lupulin depends upon a resinous, æthero-oily principle; while the bitter principle yields a real tonic. The author has seen lupulin given with good effect in scrofula.—*Med. Times and Gaz.*, Feb. 3, 1855, from *Schmidt's Jahrbuch.*, 1854, No. XII.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

34. *Curability of Cancer, and its Diagnosis by means of the Microscope.*—[In our preceding No., pp. 224–231, we gave the first portion of the discussion at the Academy of Medicine on this subject, and we shall now present the continuance of it.]

M. JULES CLOQUET thought, with M. VELPEAU, that the use of the microscope in the diagnosis of cancer, threatened to divert professional attention from clinical observation. The essential nature of cancer—not only of the encephaloid, but of all other varieties—was to reproduce itself with all its primitive characters. He had operated on a great many epithelial cancers of the lips, almost all of which had recurred; and he had removed many fibro-plastic tumours, several of which had returned. Cancers varied from one another only in their degrees of malignancy and fatality. He regarded the melanotic as the most formidable species, and could remember no instance in which he had removed a cancer of this kind without its having recurred. Next in order to it in malignancy he ranked the encephaloid, fibro-cartilaginous, fibrous, colloid, cartilaginous, epithelial, and fibro-plastic varieties. The danger of reproduction varied according as the cancer was encysted or ramified, ulcerated or not so, complicated or not with glandular engorgements, &c. We were constantly finding our prognosis to be fallacious in cases of cancer. In illustration of this he cited several cases in which malignant cancers of the breast of unfavourable prognosis had been removed, without any recurrence of the disease.

He thought the following conclusions were warranted: 1. That microscopical examinations should never be allowed to supersede clinical observation; but that both should, in every case, be resorted to. 2. That tumours, having all the characters of cancer, could occasionally be removed without recurring, although their prognosis was most unfavourable. 3. That other tumours might return, the circumstances of which were apparently the most favourable. 4. That although there were cases in which an operation seemed clearly indicated, and others in which it was as clearly counter-indicated, there were many others in which the most experienced practitioner could not decide the question with any degree of certainty or satisfaction.